

ABSTRACT

A carbon dioxide recovery apparatus and process for supercritical extraction includes providing a process stream from a supercritical extraction procedure in
5 which the process stream includes pressurized carbon dioxide, extraction process waste and optionally at least one co-solvent; reducing the pressure of the process stream below critical pressure; venting low pressure carbon dioxide vapor to exhaust; cooling the process stream to form a two phase mixture; separating the two phase mixture into a process liquid, containing co-solvent if present, and a process
10 vapor phase stream; collecting the process liquid; filtering the process vapor phase stream to remove particulates and optionally residual co-solvent; passing the filtered process vapor stream through an adsorber to remove trace impurities to form a purified carbon dioxide vapor stream; and, drying the purified carbon dioxide vapor stream to remove residual water vapor.